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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,918	11/21/2003	Stefan Eriksson	2380-775	7567
23117	7590	12/15/2005	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			LE, DANH C	
			ART UNIT	PAPER NUMBER
			2683	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/717,918	Applicant(s) ERIKSSON ET AL.	
	Examiner DANH C. LE	Art Unit 2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/21/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-14 and 17-36 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 11/21/03 and 3/3/05 have been considered by the examiner and made of record in the application file.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-5, 8-14, 17, 18, 26, 27, 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Western (US 2004/0120280) in view of Dent (US 2003/36359).**

As to claim 1, Western teaches method of operating a network node of a wireless telecommunication network (figure 1, 7, 8), the method comprising:

selecting a first coding scheme for encoding of a transmission carried to mobile station on a common downlink channel;

monitoring information received on a common uplink channel for feedback regarding link quality of the transmission carried to the mobile station on the common downlink channel;

using the feedback regarding link quality to determine whether to change from the first coding scheme to a second coding scheme for the encoding of the transmission to the mobile station.

Western fails to teach point-to-multipoint transmission carried to plural mobile stations.

Dent teaches point-to-multipoint transmission carried to plural mobile stations

(paragraph 221). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Dent into the system of Western in order to a proportional fairness scheduling algorithm.

As to claim 2, the combination of Western and Dent teaches the method of claim 1, wherein the network node is a base station controller node (figure 2, 250).

As to claim 3, Western teaches the method of claim 1, wherein the feedback received on the common uplink channel from one of the plural mobile stations includes a signal indicative of a complaint regarding link quality, and wherein upon detecting the signal indicative of a complaint on the common uplink channel, choosing a more robust coding scheme as the second coding scheme (figure 7, 8).

As to claim 4, the combination of Western and Dent teaches the method of claim 1, further comprising changing the encoding from the first coding scheme to the second coding scheme when the feedback fails to provide any complaint regarding link quality with a predetermine time interval, the second coding scheme being a less robust coding scheme than the first coding scheme (paragraph 054-055).

As to claim 5, the combination of Western and Dent teaches the method of claim 1, further comprising changing the encoding from the first coding scheme to the second coding scheme only when the feedback includes an indication that a sufficient number of the mobile stations are complaining regarding link quality (figure 7, 8).

As to claim 10, the claim is a system claim of claim 1; therefore, the claim is interpreted and rejected as set forth as claim 1.

As to claim 11, the claim is a system claim of claim 2; therefore, the claim is interpreted and rejected as set forth as claim 2.

As to claim 12, the claim is a system claim of claim 3; therefore, the claim is interpreted and rejected as set forth as claim 3.

As to claim 13, the claim is a system claim of claim 4; therefore, the claim is interpreted and rejected as set forth as claim 4.

As to claim 14, the claim is a system claim of claim 5; therefore, the claim is interpreted and rejected as set forth as claim 5.

As to claims 8, 9, 17, 18, 26, 27, 34, 35, the combination of Western and Dent teaches the method of claim 1, the combination of Dent and Dent fails to teach the common uplink channel is a random access channel and the random access channel is a PRACH channel. However, the examiner takes Official Notice that these limitations are known in the arts. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teaching of Dent into the system of Western in order to enhance the system performance of the method for a coding scheme selection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 19-25, 28-32 are rejected under 35 U.S.C. 102(e) as being anticipate by Dent (US 2003/0036359).

As to claim 19, Western teaches a mobile station configured to operate in a wireless telecommunication network (figure 7A, B), the mobile station comprising:

a receiver which receives from a network node an encoded point-to-multipoint transmission carried on a common downlink channel;

a requestor which monitors link quality of the point-to-multipoint transmission and which causes provision of feedback regarding the link quality of the point-to-multipoint transmission on a common uplink channel to a network node.

As to claim 20, Western teaches the apparatus of claim 19, wherein the feedback provided on the common uplink channel includes a signal indicative of a complaint regarding link quality (paragraph 223).

As to claim 21, Western teaches the apparatus of claim 19, wherein the feedback provided on the common uplink channel includes a signal indicative of a complaint regarding link quality in hopes that encoding of the point-to-multipoint transmission will change to a more robust coding scheme (paragraph 0019-0022).

As to claim 22, Western teaches the apparatus of claim 19, wherein the feedback provided on the common uplink channel fails to provide any complaint regarding link quality (paragraph 0019-0022)

As to claim 23, Western teaches the apparatus of claim 19, wherein no signal is provided on the common uplink channel to indicate a lack of complaint regarding link quality in hopes that encoding of the point-to-multipoint transmission will remain the same or change to a less robust coding scheme (paragraph 0019-0022).

As to claim 24, Western teaches the apparatus of claim 19, wherein the requestor determines in which time slot of a reporting group of time slots a complaint regarding link quality is to be provided as the feedback (paragraph 121, 122).

As to claim 25, Western teaches the apparatus of claim 19, wherein the requestor randomly determines in which time slot of a reporting group of time slots a complaint regarding link quality is to be provided as the feedback (paragraph 121, 122).

As to claim 28, limitation of the claim is the same limitations of claim 19; therefore, the claim is interpreted and rejected as set forth as claim 19.

As to claim 29, limitation of the claim is the same limitations of claim 20; therefore, the claim is interpreted and rejected as set forth as claim 20.

As to claim 30, limitation of the claim is the same limitations of claim 21; therefore, the claim is interpreted and rejected as set forth as claim 21.

As to claim 31, limitation of the claim is the same limitations of claim 23; therefore, the claim is interpreted and rejected as set forth as claim 23.

As to claim 32, limitation of the claim is the same limitations of claim 24; therefore, the claim is interpreted and rejected as set forth as claim 24.

As to claim 33, limitation of the claim is the same limitations of claim 25; therefore, the claim is interpreted and rejected as set forth as claim 25.

Allowable Subject Matter

Claims 6, 7, 15, 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As to claims 6, 15, the teaching of prior arts above either alone or in combination fails to teach the monitoring further comprises: forming a reporting group from a specified number of plural time slots received on the common uplink channel, one of the plural time slots of the group being randomly associated with a mobile station which complains regarding link quality, obtaining an estimate of a number of the mobile stations that are complaining regarding link quality by ascertaining how many of the plural time slots in the reporting group include a signal indicative of a complaint, comparing the estimate to a predetermined trigger value.

Dependent claims 7 and 16 are objectable for the same reason.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Frequency independent spatial processing for wideband MISO and MIMO System.

B. Walton et al (US 2003/0235147) teaches diversity transmission modes for MIMO OFDM communication system.

C. Walton et al (US 2004/0184398) teaches transmission mode selection for data transmission in a multi-channel communication system.

D. Balachandran et al (US 2004/020619) teaches method for scheduling transmissions in communication systems.

E. Luschi et al (US 2003/0043778) teaches wireless telecommunication network, a user terminal therefore, a base station therefor, and a method of telecommunication.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANH C. LE whose telephone number is 571-272-7868. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WILLIAM TROST can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



December 8, 2005.

DANH CONG LE
PATENT EXAMINER